ANTARCTICA: THE COMING IMPACT by Arun, I.R. Chaturvedi and Ashok Surwade.
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The book is the outcome of the two decades' experience gained by Shri Arun Chaturvedi, ex-DDG, GSI, on the glaciological work regarding climatic change in Antarctica. He was the leader of Antarctica expedition in 1995, 1999 and 2007. The book consists of two parts. Part I: Antarctica and Part II: The Coming Impact. The first part comprises sixteen chapters dealing with the discovery and approach of the continent, geography, climate, flora and fauna, history of Indian expeditions, economic resources, political status and tourism in Antarctica. The second part covers the summary of the scientific studies carried out in Antarctica.

As described in the book, the Antarctica is the southernmost continent surrounded by ocean and is situated around South Pole. Its 98% area is covered by thick pile of ice sheets. In quest of seal fish for oil and meat, the discovery of this continent was undertaken. Antarctica can be approached by ships and flights. This is the coldest, driest and windiest desert having annual rainfall about 20 cm along the coast and much lesser towards inland. The coal reserves and fossil evidences suggest that the Antarctica was once upon a part of the Gondwana super continent wherein the tropical fauna like dinosaurs and flora of dense forests were flourishing. It started drifting apart nearly 180 million years ago. The present status was attained around 30 million years earlier. The continent is treeless but full of oxygen. Many type of algae, bacteria, fungi, penguin, seal and whale fishes are the natives of Antarctica.

Scientists from many countries are engaged in research on various aspects of Antarctica. India established its first station, named Dakshin Gangotri, in 1983. Later on the Maitri and the Bharati stations were also set up respectively in 1988 and 2012. The main

thrust of the study is on the global warming and its impact on Antarctica. As said above, the Antarctica is covered with 2 km thick pile of ice, its melting due to global warming, could raise the sea level to about 70 m. As a consequence, a slow motion tsunami of sea water might be generated causing drowning of many of the islands and the coastal regions of world resulting migration of huge population from their respective places. Also, a major portion of the Antarctica might be exposed barren after the ice melting. The scientific research and future planning may save the continent in preserving its natural ecosystem. The other aspects of study are about ozone layer depletion, climatic history, plate tectonic, link with Gondwanaland, magnetic field, weather study and habits of natives such as penguin, krill, seal and whale fishes.

Coal, iron ore, platinum, copper, chromium, nickel, gold, oil and natural gases are the mineral resources of the continent. Their exploitation is banned till 2048 under the Antarctica Treaty for the environmental protection. However, the off coast fishing and small scale tourism are permitted.

This is a popular science book written with the objective of conveying the general aspects of Antarctica, Indian scientific expeditions, global warming and the aftermaths of its ice-sheet melting. This is a handy reference book to the students curious to know about Antarctica and also is a ladder to carry out advance research by the scientists in multidisciplinary fields.

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